sheet function as voltage dividers during the first time interval, and during a second and mutually exclusive time interval the first output lead of the voltage source is connected to both ends of one of the second pair of opposite series resistor networks and the second output lead of the voltage source is simultaneously connected to both ends of the other of the second pair of opposite series resistor networks and the first pair of opposite series resistor networks function as voltage dividers thereby producing orthogonal electric fields having uniform equipotential lines in the resistive sheet;

a conductive probe for electrically contacting the surface of the resistive sheet at a point whose x and y planar coordinates are to be determined; and

output means connected between the conductive probe and one corner spot electrode responsive to a potential difference between that corner spot electrode and the contacted point on the resistive sheet whereby separate electrical output signals are derived during the mutually exclusive time intervals that are accurately related to the *x* and *y* planar coordinate of the contacted point on the resistive sheet.

6. The sensor of claim **5** wherein the conductive probe includes a normally-open pressure sensitive switch in series with the probe and the output means whereby signals are obtained from the output means only when a preset pressure is exceeded between the probe and the surface of the resistive sheet to thereby close the pressure sensitive switch.

7. The sensor of claim **1** further comprising: a layer of a deformable insulation in contact with substantially all of one surface of the resistive sheet; and a sheet of conductive material spaced from the resistive sheet by the layer of the deformable insulation.

8. The sensor of claim **7** wherein the layer of deformable insulation is a fabric net, the threads thereof being about 0.004 in. in diameter and the threads being spaced apart about 0.05 to about 0.2 in.

9. The sensor of claim **7** wherein the layer of deformable insulation is a cured self-healing dielectric gel having a thickness of from about 0.002 to about 0.005 in.

10. The sensor of claim **7** wherein the conductive material is a conductive metallic sheet.

11. The sensor of claim **7** wherein the conductive material is a conductive plastic sheet.

12. The sensor of claim **7** further comprising: a voltage source having first and second output leads; switches connected between the voltage source leads and the corner spot electrodes on the resistive sheet; means for operating the switches sequentially whereby during a first time interval the first output lead of the voltage source is connected to both ends of one of a first pair of opposite series resistor networks along one edge of the resistive sheet and the second output lead of the voltage source is simultaneously connected to both ends of the other of the first of series opposite pair resistor networks along the opposite edge of the resistive sheet and whereby a second pair of opposite series resistor networks along the remaining edges of the resistive sheet function as voltage dividers during the first time interval, and during a second and mutually exclusive time interval the first output lead of the voltage source is connected to both ends of one of the second pair of opposite series resistor networks and the second output lead of the voltage source is simultaneously connected to both ends of the other of the second pair of opposite series resistor networks and the first pair of opposite series resistor networks function as voltage dividers thereby producing orthogonal electric fields having uniform equipotential lines in the resistive sheet; means for electrically contacting the resistive sheet and the sheet of conductive material at a point whose *x* and *y* planar coordinates are to be determined; and output means connected between the sheet of conductive material and one corner spot electrode responsive to a potential difference between that corner spot electrode and the sheet of conductive material whereby separate electrical output signals are derived during the mutually exclusive time intervals that are accurately related to the x and y planar coordinate of the contacted point on the resistive sheet.

13. The sensor of claim **12** wherein the means for contacting the resistive sheet and the sheet of conductive mateirial is a pointed probe for pressing the resistive sheet into contact with the sheet of conductive material at a point by deforming the layer of deformable insulation at that point.

14. The sensor of claim **13** further comprising pressure sensitive means connected to the output means whereby output signals are produced only when pressure between the resistive sheet and the sheet of conductive material exceeds a preselected value.

15. The sensor of claim **14** wherein the pressure sensitive means comprises an operational amplifier, with an applied bias, connected between the resistive sheet and the sheet of conductive material to compare the contact resistance between the resistive sheet and the sheet of conductive material as pressure is applied by the probe with a preselected resistance value equivalent to the bias whereby the potentials proportional to the x and y planar coordinates at a point are applied to the output means only when the contact resistance is less than the preselected value.

16. The sensor of claim **14** wherein the pressure sensitive means comprises a normally open pressure sensitive electrical switch within the probe connected in series with the output means whereby output signals are produced only when the pressure applied by the probe exceeds a preselected value to thereby close the pressure sensitive switch.

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